State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-16-23

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

DAIMLERCHRYSLER AG

Pursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 of the Health and Safety Code; and,

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following DailmlerChrysler AG 1999 model-year engine, with rated power between 175 and 750 horsepower, and exhaust emission control systems are certified as described below for use in heavy-duty off-road equipment:

Typical Equipment Usage: Crane, Road Grader, Harvester, Compressor

Fuel Type: Diesel

Engine Family	Liters	Exhaust Emission Control Systems and Special Features
XMBXL21.9R6A	22, 15 and 11	Turbocharger Smoke Puff Limiter

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM) certification exhaust emission standards, in grams per brake horsepower-hour (g/bhp-hr), and the opacity of smoke emission standards, in percent (%), during acceleration (Accel), lugging (Lug), and peak (Peak) modes, for this engine family are (Title 13, California Code of Regulations, Section 2423):

Exhaust Emissions (g/bhp-hr)				Smoke Opacity (%)		
THC	CO	NOx	PM	Accel	Lug	Peak
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx and PM exhaust emission certification values, in g/bhp-hr, and the opacity of smoke emission certification values, in percent (%), for this engine family are:

Exhaust Emissions (g/bhp-hr)				Smoke Opacity (%)		
THC	CO	NOx	PM	Accel	Lug	Peak
0.2	0.5	5.7	0.2	10	5	18

BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "Emission Control Labels--1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2425 et seq.).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 17th day of March 1999.

R. B. Summerfield, Chief
Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

2/8/99

EO: U-R-16-23

Manufacturer: DaimlerChrysler AG Process Code: New Submission

EPA Engine Family: XMBXL21.9R6A Manufacturer Family Name: NA

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
444 LA. E I/1	OM 444 LA	670 @ 2100	170	239.8	2028 @ 1200	198	159.1	EM, SPL
444 LA. E I/2	OM 444 LA	643 @ 1900	175	223.7	2028 @ 1200	198	159.1	EM, SPL
444 LA. E I/3	OM 444 LA	600 @ 2100	153	217.1	1806 @ 1200	170	136.5	EM, SPL
442 LA. E I/1	OM 442 LA	543 @ 2100	217	204.2	1733 @ 1100	262	128.7	EM, SPL
442 LA. E I/2	OM 442 LA	496 @ 2100	198	186.8	1548 @ *	240	117.8	EM, SPL
442 LA. E I/3	OM 442 LA	496 @ 1900	212	180.6	1548 @ 1100	240	117.8	EM, SPL
442 LA. E I/4	OM 442 LA	441 @ 1700	206	157.2	1475 @ 1100	227	111.6	EM, SPL
442 LA. E I/5	OM 442 LA	429 @ 2100	172	162.0	1401 @ 1200	207	110.8	EM, SPL
442 LA. E I/6	OM 442 LA	429 @ 1900	185	158.3	1401 @ 1200	207	110.8	TC, EM, SPL
442 LA. E I/7	OM 442 LA	398 @ 2100	162	152.9	1290 @ 1200	188	100.9	EM, SPL
442 LA. E I/8	OM 442 LA	383 @ 1700	178	135.6	1312 @ 1200	192	103.0	EM, SPL
					* 1100 -1250			
441 LA. E I/1	OM 441 LA	402 @ 1900	230	143.6	1305 @ 1200	260	103.1	EM, SPL
441 LA. E I/2	OM 441 LA	335 @ 2100	175	123.6	1069 @ 1200	210	84.4	EM, SPL
441 LA. E I/3	OM 441 LA	335 @ 1900	191	122.4	1069 @ 1200	210	84.4	EM, SPL
441 LA. E I/4	OM 441 LA	320 @ 2100	168	118.8	1069 @ 1200	210	84.4	EM, SPL
441 LA. E I/5	OM 441 LA	316 @ 1800	187	113.6	1032 @ 1200	208	83.5	EM, SPL
441 LA. E I/6	OM 441 LA	292 @ 1600	190	102.5	1032 @ 1200	208	83.5	EM, SPL